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INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

S-E-C-R-E-T [redacted]

50X1-HUM

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COUNTRY	Hungary	REPORT	[redacted]
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ENCLOSURE ATTACHED

PLEASE ROUTE

ENCLOSURE ON ROUTING

SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE.

[redacted]

[redacted] report, with sketches, describing the ties, spikes, and fishplates used on Hungarian railroads.

[redacted]

13 MAY 1957

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24 MAY 1957

27 MAY 1957

S-E-C-R-E-T [redacted]

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STATE	X	ARMY	X	NAVY	X	AIR	X	FBI		AEC					

(Note: Washington distribution indicated by "X"; Field distribution by "#".)

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SECRET

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HUNGARY

Economic/Military

Details of sleepers and rails on Hungarian railway tracks.

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1. On those tracks using concrete sleepers the distance from the centre of one sleeper to the centre of the next one is one metre. The exception to this is at the section-joints, where the two sleepers are only 42 cms from centre to centre, (the sleepers being 22 cms broad at the base and having a gap of 20 cms between the bases at these joints.

2. On those tracks using wooden sleepers (e.g. all the main lines), the corresponding figures are 1.20 metres and 45 cms (wooden sleepers are 25 cms broad at the base, but the gap between them at section joints remains at 20 cms).

3. Concrete sleepers are of two types. The most common ones are 18 cms across on their top surface and 22 cms across on their lower surface. They are 15 cms thick. Each sleeper is reinforced with eight rods of steel (5 mm), all of which are braced with interlaced wire (2 mm) which is attached to the eight rods in a lattice-type pattern (see figure 1 of appendix). The other type of concrete sleeper is similar to this one, but there is a slight curve downwards from the top surface and a slight curve upwards from the lower surface (see figure 2). There is no curving on the sides of the sleeper. This type was introduced in 1955

4. Wooden sleepers have the same thickness as the concrete sleepers (i.e. 15 cms) but the top surface is 20 cms across and the lower surface is 25 cms across. There is an S - shaped piece of steel 5 cms deep which is let into both sides of the sleepers to prevent cracking when drying after the sleeper has been soaked in preservature. (See figure 3). Sleepers are normally about 2 metres long. They are extended somewhat under the points, but only up to a maximum of 5 metres. For every metre in length above the normal 2 metres, an extra 2 cms is added to the width. (Thus a four metre wooden sleeper will be

29 cms across at the base.) Wooden sleepers are always used under points even in places where the rest of the track has concrete sleepers.

5. The gap between each section of rail is set at 2 cms at -35°C. During summer weather the rails almost touch.

6. The method of securing the rails to the sleepers is by driving large headed nails down into the sleeper and allowing the heads to clip over the lower flange of the rail by a distance of from 5 - 10 mms. The rail itself lies on a steel block (placed on top of the wooden sleepers or in a recess in the case of concrete sleepers). The block is fitted with holes large enough to allow the nails to pass through. The block itself is slightly recessed to take the rail. (See figure 4). In width the block is slightly narrower than the width of the sleeper.

7. The nails used are known as type I 48 (see figure 5). They have replaced those known as type I 34 and type "C" wherever 34 kilogram rail has been replaced by the new 48 kilogram rail. The I 48 has an overall length of 13.6 cms, the lower 12 cms of which are fitted with a coarse thread. The nail is hammered in practically all the way and then given turns with a large spanner. The top 36 mms include an oblong type of head 8 x 20 mms for screwing down the nail. In concrete sleepers the nails are sunk into a wooden plug inserted into holes in the concrete.

8. On main lines, each of these blocks is fitted with holes for three nails - one inside the rail and two outside. In some smaller stations only one nail is used on the outside, together with one inside. In marshalling yards two outside and one inside is practically universal; the only difference is that where the old 34 kgs rail is still being used the steel supporting block is smaller.

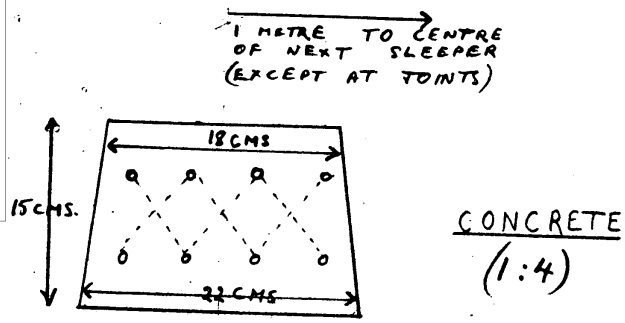
9. All fishplates connecting sections of rail have four holes, two on each side. In some stations only one of these holes on each side is actually used. On the old 34 kgs. rail the fishplates are

smaller.

10. Section lengths are a standard 24 metres.

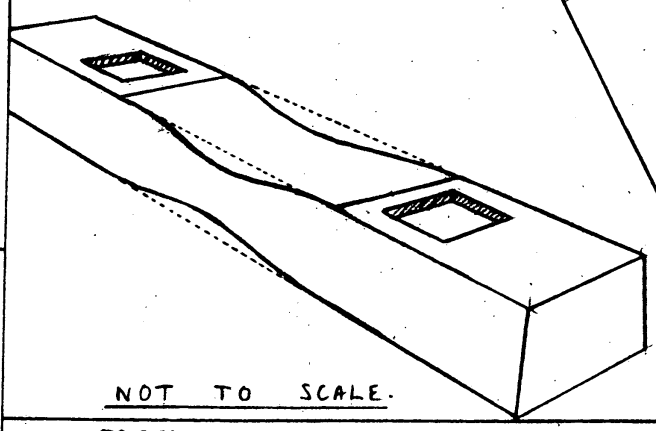
11. On narrow gauge railways the weight of the rail may be 15, 18, 20, 25, 28 or 30 kilograms per metre.

FIG. 1.



CONCRETE
(1:4)

FIG. 2.



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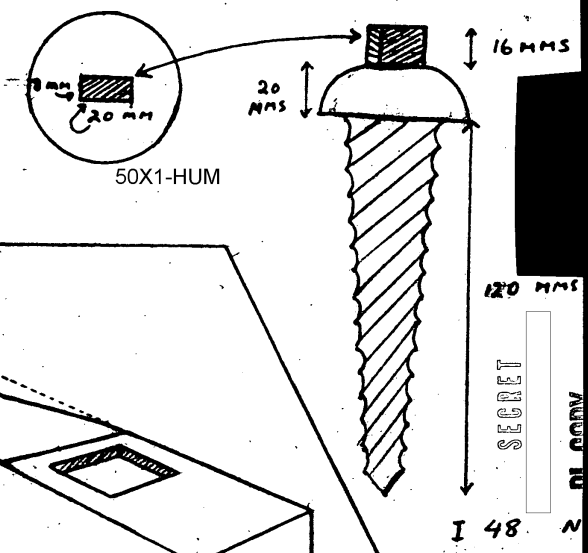

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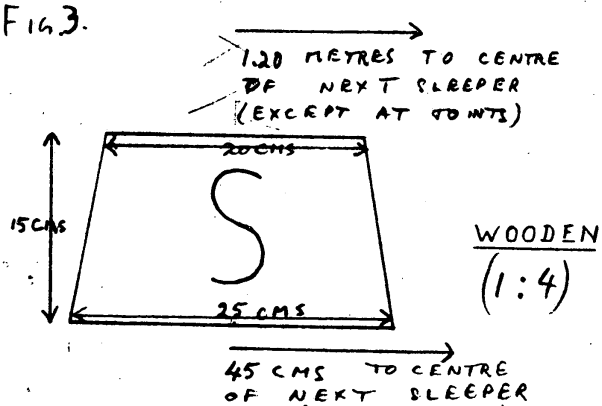
FIG.

FIG. 3.



WOODEN
(1:4)

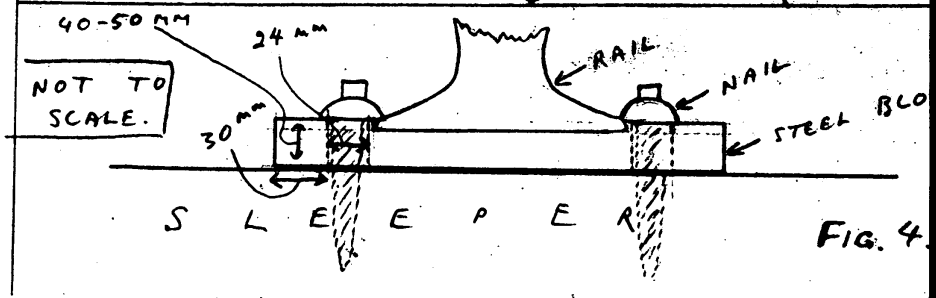


FIG. 4.